

**ABSTRACT OF THE DISCLOSURE**

A medical examination and/or treatment system has an x-ray image acquisition system with a radiation source, a radiation receiver, as well as a control and processing device (with an image generation device) for controlling the source and receiver, a catheter system with an associated image acquisition system for optical coherence tomography, including a catheter with an optical fiber, via which light is guided to and radiated into the region of the catheter tip that is introduced into an examination region, and via which reflection light from the illuminated examination region is guided to a control and processing device with image generation device of the image acquisition system, as well as at least one monitor to present the x-ray images and coherence tomography images.

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